

Quivett Creek Subwatershed Brewster, Cape Cod, Massachusetts

The Quivett Creek Subwatershed is located in Brewster and Dennis. It has an area of 1,415 acres and is relatively undeveloped. Quivett Creek is a coastal stream system. The creek system includes a large marsh area and is the site of an annual herring run to its headwaters at Bound Brook Pond. The land mass adjacent to Quivett Creek has been identified as a major Marine Water Recharge Area.

An ongoing debate in the watershed is the proposed development of a portion of Crowe's Pasture, a popular nature area. In an effort to protect the land from unwanted development, the Town of Dennis nominated 250 acres of land comprising Crowe's Pasture and Quivett Neck off Route 6A as a District of Critical Planning Concern in August 2001. This allows Dennis to stop development in the area while strict zoning regulations are put in place.

Approximately 75% of Brewster has municipal water. Some areas that do not have town water are the subdivisions off of Slough Road in the southwest portion of the town, Crowell Bog Road between Route 124 and 137, and the middle section of Great Fields. Well #4 was closed due to magnesium and iron in the water and a treatment plant built to address the problem is nearly complete (Spring 2002). The town plans to have water available to virtually all areas within the next five years and will put in a fifth well in the next few years. There are no municipal sewers in this subwatershed.

Stewards:

- Dennis Water Quality Advisory Board
- Brewster Ponds Water Quality Stewards (formed May 2002)

Studies conducted in the watershed:

- Brewster Priority Open Space Project – 2001. The Compact of Cape Cod Conservation Trusts, Inc. Created a ranking list of undeveloped parcels that, if acquired as open space, would protect the most important natural resource areas in Brewster. 266 parcels were located, mapped, and evaluated.
- Cape Cod Atlas of Tidally Restricted Salt Marshes. 2001. Cape Cod Commission.

Who is collecting water quality data and where:

- Volunteers in the Brewster Pond Water Quality Stewards conduct dissolved oxygen, temperature, and water clarity tests bi-weekly and collect water samples monthly and deliver to the North Atlantic Coastal Laboratory for analysis. Ponds sampled are Canoe, and just south of this subwatershed, Lower Mill, Upper Mill, Walkers, and Slough.

Management actions taken:

- Quivett Creek Salt Marsh and Fish Run Restoration Project. 11-acre salt marsh restoration and anadromous fish passage enhancement project, estimated cost \$136,000. Project involves replacement of two 30" diameter pipes with an 8'x8' box culvert to enhance tidal flows to eliminate a barrier to migrating river herring. Accepted under the GROWetlands Initiative of the Massachusetts Wetlands Restoration Program (2001). Construction January 2003.

- Crowe's Pasture Clearing. 15 acres of the Crowe's Pasture Conservation Area were cleared of invasive and exotic shrub and forest species to allow for regeneration of grasslands in 2000. Joint project between Town of Dennis, MA Division of Fisheries and Wildlife, and the Natural Resources Conservation Service. More information available at <http://www.state.ma.us/dfwele/dfw/bdi/crowes7e2.htm>.
- Project proposed in Fall 2001 to improve the health of Canoe Pond. Project involves installation of air pumps to enhance water mixing and dissolved oxygen levels. Aquamats will be used to support nitrifying bacteria and will act as filters.
- As of 2001 the Brewster Conservation Trust had successfully negotiated deed restrictions that protect an additional 34 acres of the Brewster portion of the Quivett Creek Subwatershed from development.

Subwatershed facts: (For data sources see Appendix)

- 21 E sites: none
- Solid waste sites: none
- Zone IIs located in this watershed: 1
- Interim Wellhead Protection Areas (IWPAs): 1
- Percent of the undeveloped land that is protected (according to 1985/1990 data): 34.5%
- Acres of existing wetlands: 270
- Certified vernal pools: none
- Named freshwater ponds: Round, Canoe (*Brewster*)
- Named rivers or creeks: Quivett Creek (*Brewster, Dennis*)
- 1998 Massachusetts 303(d) List of Impaired Waterbodies: A segment of Quivett Creek, from just upstream of Route 6A to the mouth at Cape Cod Bay – pathogens.
- Shellfish growing areas: Quivett Creek is prohibited to shellfish harvesting.
- This watershed contains Natural Heritage and Endangered Species Program (NHESP) Estimated Habitats of Rare Wildlife.

Priorities:

- Develop funding partnerships between the Town of Brewster and the Brewster Conservation Trust, state and federal agencies, and land donations by private landowners in order to achieve their goal of preserving half (2,900 acres) of remaining open space.
- Identify and certify vernal pools in Brewster.
- Expand water quality monitoring program of the Brewster Pond Quality Stewards to include sampling of all ponds in Brewster.
- Acquire open space. Parcels considered a priority for acquisition for water supply protection and development: Brewster Tracts 8, 10, 12, 14, 16, 17, 21, 22, 27, 29, 30, 31, 34, 36, 39, 40, and 41 were ranked as having medium or high water supply development potential in the Cape Cod Commission's *Priority Land Acquisition Assessment Project* (April 1999). These tracts are located throughout the Town of Brewster.
- Implement those salt marsh restoration projects identified in the 2001 *Cape Cod Atlas of Tidally Restricted Salt Marshes* that have been evaluated and prioritized by the town. Sites are: Sea Street restriction of Quivett Creek (Site DE-2/BR-1), cranberry bog berm restriction of channel off Quivett Creek (BR-2), and another cranberry bog berm restriction of channel off Quivett Creek (BR-3). Sites just east of this subwatershed are Paine's Creek Road restriction of channel into

Freeman's Pond (BR-4), Route 6A restriction of Stony Brook (BR-5), and Route 6A restriction of a channel off of Stony Brook (BR-6).

- Implement Quivett Creek Salt Marsh and Fish Run Restoration Project

Recreation:

Camping areas: none

Golf courses: none

Pathways and trails:

- www.capecodcommission.org/pathways/trailguide.htm

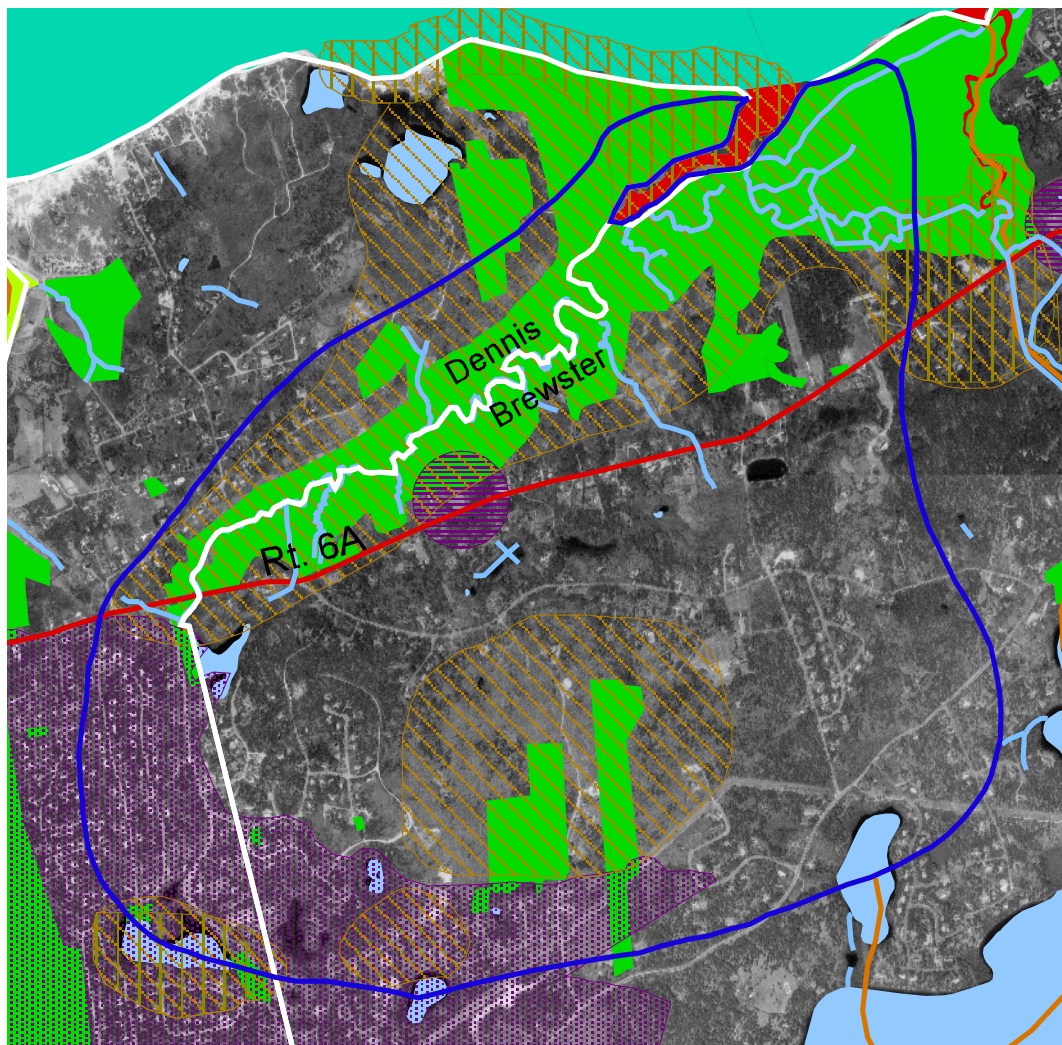
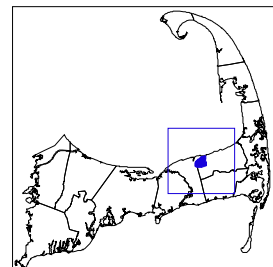
Public access:

- www.state.ma.us/dfwele/pab/pabSEmap.htm

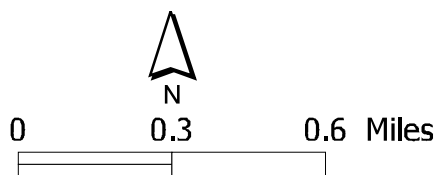
Public beaches and landings: none

Quivett Creek

Brewster and Dennis, MA



Watershed Resources



Natural Heritage and Endangered Species Program Data

- Certified Vernal Pool
- Priority Habitats of Rare Species
- Estimated Habitats of Rare Species

Groundwater Protection Areas

- Interim Wellhead Protection Area
- Zone II
- Solid Waste Facility

Watershed Boundary

Anadromous Fish Run

Shellfish Growing Areas

- APPROVED
- CONDITIONALLY APPROVED
- MANAGEMENT CLOSURE
- PROHIBITED
- RESTRICTED

Open Space

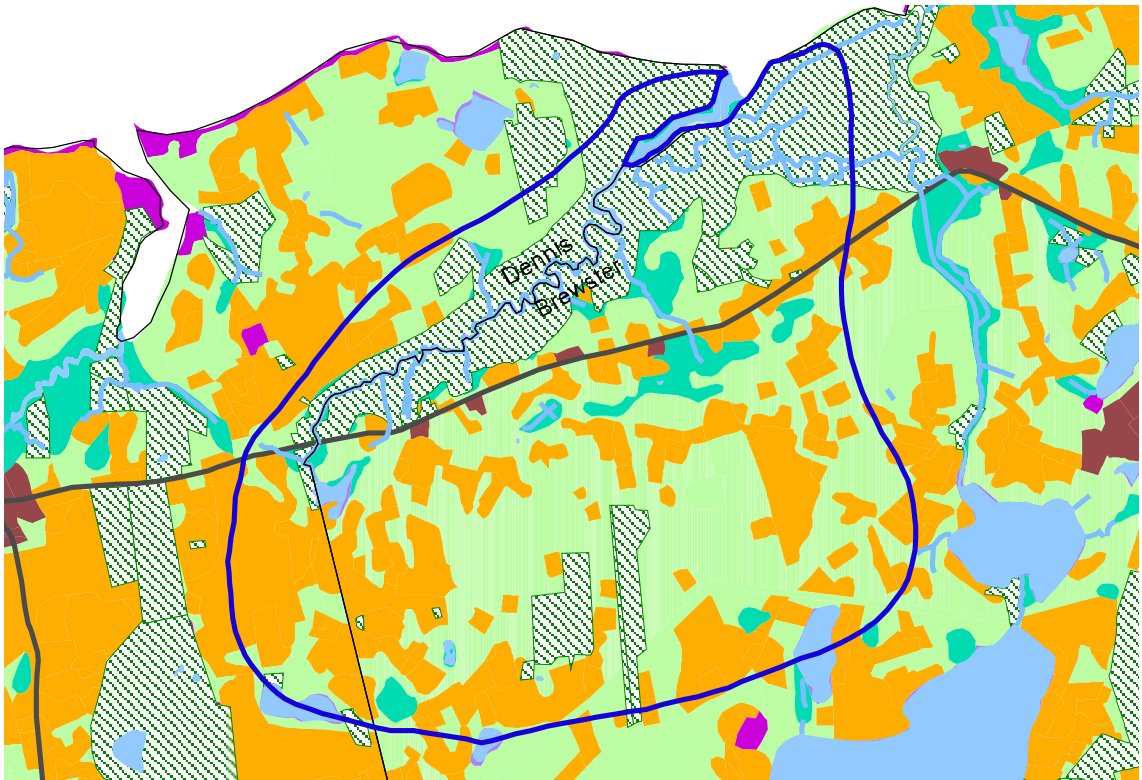
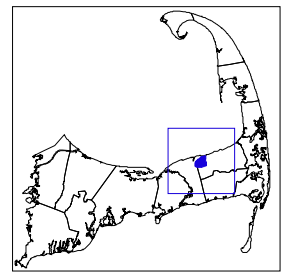
Streams

Ponds

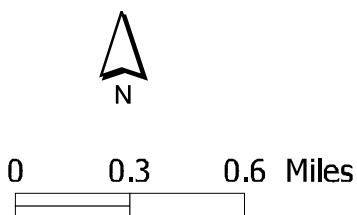
Roads

Quivett Creek

Brewster and Dennis, MA



Land Use



Land Use

